Office of Management and Budget

December 4, 2001

The Honorable Christine Todd Whitman
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Room 3000
Washington, DC 20460

Dear Administrator Whitman:

EPA is engaged in the critical task of reducing the public health risks associated with exposure to air pollution. In recent months, we have discussed with your staff the health risks (e.g., hospital admissions and premature deaths) associated with fine particulate matter (PM). We share your commitment to develop legislative and administrative programs to reduce public exposure to PM. The purpose of this letter is to highlight some critical research needs that can help target environmental-protection investments to the most important sources of PM and thereby better inform cost-benefit studies of future air pollution control policies.

We understand that EPA is now devoting a substantial share of its research budget to better understand the effects of PM on public health. We support this research effort and recommend that it focus on the following critical issues: (1) potential confounding of PM health effects with other pollutants in the air; (2) attribution of the PM health effects to specific constituents (e.g., sulfates versus nitrates versus organic and elemental carbon, and metals), and (3) the quantitative relationship between exposure to different particles and various health effects. The National Academy of Sciences (NAS) Committee on Research Priorities for Airborne Particulate Matter, chaired by Dr. Jonathan Samet, identified a similar set of issues in its 1998 Report and continues to advise EPA on its research program. We are also encouraged that the NAS Committee on Estimating the Health-Risk Reduction Benefits of Proposed Air Pollution Regulations, chaired by Dr. John Bailar, will be identifying important research needs in this area. We also support the university-based centers on PM research that have been established to address these central issues.

Based on our reviews of EPA's recent rulemakings on air pollution and the agency's 2001 Regulatory Plan, it is clear that we need to understand better which sources of PM in our economy are responsible for the PM-related health effects. At the present time, there is no scientific consensus about what toxicity values are appropriate for specific types of particles and, as a result, EPA has adopted a default position in past regulatory analyses that all particles are equally toxic. However, there is emerging evidence that some types of fine particles may pose a greater health risk. The more recent

multi-city studies suggest that PM appears to be more harmful in some cities than others, variation that may be attributable to the different kinds of particles found in different cities. Studies vary in their findings about which sources of PM are most strongly related to mortality, identifying a variety of sources from coal combustion and oil burning to the emissions from motor vehices.

The Electric Power Research Institute (EPRI) is undertaking in Atlanta a new study to address the questions raised by these studies about whether all particles should be treated as equally toxic. The Atlanta study is using more intensive monitoring data to explore the relationship between specific types of fine particles and adverse health effects. We believe that this question should be tested across a number of different cities to determine whether there is a consistent pattern in the relative toxicity of different particle types. The data collected from EPA's "super-site" particulate monitors and from its speciation network may play an important role in such research, however, it may also be necessary to undertake additional monitoring to support daily time-series studies of health effects. In order to facilitate this research, we recommend that EPA consider a private-public partnership program to perform this critical function. We recommend that any such program provide at the outset for public release of collected data for scrutiny and reanalysis, after the original investigators have had the opportunity to publish their findings.

While we recognize that EPA has a research plan for PM, the plan should be flexible enough to retarget some of EPA's $69 million PM research budget to follow-up on critical questions raised by research funded earlier in the program. If research can identify those particles most responsible for health risks, it may be possible to design controls that do more for public health and cost the economy less than would occur through policies that assume all particles are equally toxic. Given the tens of billions of dollars of social costs that will be devoted to PM emissions over the next 20 years, this follow-up research should begin without delay in FY 2002.

As always, my staff and I look forward to working with you on this important issue.

Sincerely,

/s/

John D. Graham, Ph.D.
Administrator